

REMARKS

Claims 1-20 are pending. By this amendment, claims 12, 13 and 19 are amended for clarification and to address section 112 rejections. Claims 11 and 18 are amended to place these claims into allowable independent form. No range of equivalents is intended to be surrendered by these amendments. No new matter is introduced. Reconsideration and issuance of a Notice of Allowance are respectfully requested.

Applicant thanks the Examiner for indicating the allowability of claims 7, 11, 16 and 18. Claims 11 and 18 are amended to place them in allowable, independent form.

Claims 12, 13, 19 and 20 are rejected under 35 USC 112, second paragraph, as being indefinite. Claims 12 and 13 are rejected as reciting "the offset" without antecedent basis. The dependency of claims 12 and 13 is changed to claim 11, which provides antecedent basis for "the offset." Withdrawal of this rejection is respectfully requested.

Claims 19 and 20 were rejected as indefinite as not providing for a single statutory class of invention. As amended, claims 19 and 20 are standard computer-readable medium claims reciting a computer readable medium that comprises instructions (e.g., software) for performing a recited process. These claims are directed to a single statutory class. Withdrawal of this rejection is respectfully requested.

Claims 1-6 and 8-10, 14, 15, 17, 19 and 20 are rejected under 35 U.S.C. 102 (b) as being anticipated by Japanese Reference (2001-305118) to Shimomura ("Shimomura"). Applicants respectfully traverse this rejection since each and every element of claims 1-6 and 8-10 are not expressly or inherently described in Shimomura.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); see also MPEP § 2131. "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

For example, Shimomura does not expressly or inherently describe wherein the inlet includes an inlet-pressure set-point that can be set to a negative pressure set-point representing a pressure below ambient pressure as recited in claim 1. While Shimomura does disclose "a preset threshold S", there is no disclosure that the preset threshold S can be set to a negative pressure set-point representing a pressure below ambient pressure. There is no discussion, in the sections cited by the Office Action or elsewhere, in Shimomura of setting threshold S to a negative pressure set-point.

That output value P may exceed threshold S does not disclose that threshold S may be set to a negative pressure set-point.

Indeed, while Shimomura does disclose a vacuum pump, there is no express or inherent description that an inlet-pressure set-point can be set to a negative pressure set-point. Indeed, all that a vacuum pump, such as in Shimomura, requires is that the outlet of the column can be at any pressure below the inlet pressure for the flow in the column to be from inlet towards the outlet. It is standard in the industry for the input to the column to be controlled at a gauge pressure above ambient. As stated above, Shimomura does not disclose or discuss inlet pressures below ambient. Since Shimomura does not disclose this feature, Shimomura fails to disclose each and every element of claim 1. Claim 1 is allowable for at least this reason. Allowance of claim 1 is respectfully requested.

Dependent claims 2-6 and 8-10 are allowable for at least these reasons and the independent features they recite. For example, Shimomura does not disclose "wherein the GC includes instructions on a computer-readable medium," as recited in claim 5. Comparator 12 is simply a comparison circuit that generates a signal to operate alarm circuit if P exceeds S. There is no express or inherent teaching that comparator 12 includes instructions on a computer readable medium. Furthermore, comparator 12 merely generates a signal and does not set an inlet pressure set point or drive the valve. Likewise, Shimomura does not disclose "a computer, connected to the GC" as recited in claim 10. Indeed, the Office Action rejects this claim without any citation to Shimomura for support. Shimomura does not disclose the independent features recited in the dependent claims. Allowance of claims 2-6 and 8-10 is respectfully requested.

Furthermore, Shimomura does not expressly or inherently describe:

receiving a desired negative pressure set-point representing a pressure below ambient pressure; and

setting an inlet pressure set-point to the desired negative pressure set-point, wherein the desired negative pressure set-point indicates a desired negative inlet pressure for an inlet of the GC,

as recited in claims 14 and 19. As discussed above, Shimomura does not disclose a negative pressure set-point, let alone setting inlet pressure set point to the desired negative pressure set-point. As stated above, the threshold S is not expressly or inherently described anywhere in Shimomura as being a negative pressure set point. Further, Shimomura does not disclose "receiving" the threshold S. Rather, as set forth in Shimomura, the threshold S is "preset" not received. Consequently, Shimomura does not disclose each and every element of claims 14

and 19. Therefore, claims 14 and 19 are allowable for at least these reasons. Allowance of claims 14 and 19 is respectfully requested.

Moreover, as set forth above, Shimomura does not disclose a computer-readable medium comprising instructions, as set forth in claim 19. Nowhere does Shimomura provide any disclosure or description that it includes anything more than a simple comparator and alarm circuit to determine if output value P exceeds preset threshold S and to curtail flow rate. There is no discussion of a computer program operating in Shimomura. Claim 19 is further allowable for at least this reason.

Dependent claims 15, 17 and 20 are allowable for at least these reasons and the independent features they recite. Allowance of claims 15, 17 and 20 is respectfully requested.

In view of the above remarks, Applicants respectfully submit that the application is in condition for allowance. Prompt examination and allowance are respectfully requested.

Should the Examiner believe that anything further is desired in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

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Respectfully submitted,



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